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#### 14. SOME OBSERVATIONS ON THE COMMON HOUSE GECKO (*HEMIDACTYLUS FRENATUS*) OF SOUTHERN INDIA

##### INTRODUCTION

Studies on the food and feeding habits in Indian lacertilian species are few and relate only to *Calotes versicolor* (Dave 1960, Indurkar & Sabnis 1976), *Mabuya dissimilis* (Dave 1960), *Ophiomorus tridactylus* (Rathor 1969), *Varanus bengalensis* (Minton 1960), *Hemidactylus flaviviridis* (Parshad 1916), and *Hemidactylus brooki* (Laximinarayana *et al.* 1975). One of the commonest house gecko in South India is *Hemidactylus frenatus*. Although they are very common yet very little is known about their dietary, reproductive and social behaviour. Data were collected on food, feeding habit, home-range and courtship behaviour of the South Indian house gecko, which is being presented.

##### MATERIALS AND METHODS

The present report is based on observations on lizard *Hemidactylus frenatus*, resident in some lodges of Bandipur National Park, Mysore. The lizards were collected in the study area by hand. They were marked and sexed. A number was painted on the back of each lizard with black paint. This was visible at a good distance but each lizard was recaptured and repainted after its shedding. The lizards after their capture were released within 3-5

minutes—in the area where they were caught. The lizards released after their marking were found to be nervous for 30-60 minutes before they resumed their normal activities. The sexing of individuals was done by pressing the vent region with the thumb. In males, hemipenis comes out under mild pressure while in females a milky liquid oozes out. The total number of lizards in the study area were 14 (5 ♂♂, 7 ♀♀ and 2 juveniles). The study period extended from 10th of January, 1978 to 15 of March, 1978, which incidentally coincides with the breeding period of the lizard. The largest male and female were measured (see Table) to assess size relation if any, to sexual dimorphism which was not noted. The adult males and females did not show any striking colour pattern differences while the

TABLE

Measurements (mm)	Male	Female
Total body length	127	124
Snout vent length	65	63
Tail length	62	61

juveniles were recorded to have darker dorsum than the adults. Moreover, two rows of interrupted longitudinal bands were quite distinct dorsally that are not sharp and seem to fade out with maturity.

FEEDING HABITS

These house geckoes are nocturnal in habit and feed from dusk to midnight, although occasionally, some were seen feeding during daytime as well. During daytime, they generally hide in crevices, behind tube lights or some other such retreats. The diurnal retreats are regularly occupied. Around dusk, they begin to move about and were seen to be most active between 20-24 hrs. Past midnight their activity declines. At night, they were often attracted by lights, which provided them incidental feeding grounds. During the morning hours, they were often found basking on the outer walls and ledges of the lodges. Twice (on 17-ii-1978 at 11.30 a.m. and on 2-iii-1978 at 2 p.m.), a house gecko was observed to come out of its hiding to lap up a few drops of water in a bathroom.

The insects hovering at lamps are approached and caught directly but in the case of still insects, the lizards reach to about its flight distance and stop, bob their heads and flick the tongue. If the insects move towards the lizards and are within capturing distance, the lizards grab them. Large insects are usually preferred. Should the prey happen to be a large meal, then after the capture, it is violently shaken by jerky movements of head and then hammered against the surface till it is motionless and ceases to make any attempt to escape. During the ground feeding, the insects are often released and recaptured.

Though the diet was found to be varied, certain families and orders of insects such as hemipterans, hymenopterans (except winged ants) and some coleopteran families (Cantharoidae, Hydrophilidae) are left alone. The dipterans (flies and mosquitoes), orthopterans (grasshoppers, cockroaches and mantids), homopterans (leaf hoppers) and lepidopte-

rans (moths and butterflies) are preferred.

HOME-RANGE

Tinkle (1967) defined home-range as an area occupied by an animal and utilized in its search for food, for mates, and for shelter. These lizards are also found to preserve their territorial rights particularly during the breeding season as indicated by the instance of 7th February when a resident male was found to chase an intruder male out of its territory. The resident male at that time was seen to possess one female. Generally one male and one female were seen together but occasionally two females were also sighted with one male. The home-range was found to be determined by the availability of food and egg laying sites. In places where the lamps were regularly lighted and crevices or holes were available near by, the lizards used to confine themselves to restricted areas; on the other hand where the lamps were not in regular use and hiding places were far off from the lamps, they used to wander in much larger areas. The home-range varies from 2 sq. m to 6.5 sq. m. The calling of the male's *chuck-chuck* can be heard at any time irrespective of any hour of the day or night. But these calls were more frequent during the night between 21-25 hrs. These calls were so loud that they could be heard at a distance of 10-15 metres. Four marked males caught from distant places were introduced in the resident male area (2 on 30th January, and 2 on 4th February). These introduced males were found to take no part in feeding and remained 1-2 metre apart from the resident male for 2 to 30 hrs and subsequently they were not sighted in the area. The first introduced pair was seen to be driven away by the resident male within 2 hrs of their introduction, while the second pair was seen there up to 30 hrs, after that period they were

not traceable, probably driven away from the area. On 15th March, a juvenile was seen in the area of resident male, who after sighting it, started calling *chuck-chuck* which was responded to by the intruder by moving away from the site.

#### COURTSHIP AND MATING

On 9th February at 21.15 hrs copulation was noticed in a pair of lizards. The male after seeing the female, moved slowly towards it, and stopped at half a metre distance for 40 seconds. The male bobbed his head and flickered his tongue, and slowly approached the female. It made three continuous calls *chuck-chuck-chuck*. He made half a circle so as to come to the left side of the female. The female did not move and male nodded its head and licked her snout. The male moved and lay parallel to the female. The female now responded by raising her tail in an arc. The male moved towards the right and hinder part of the female so as to bring the cloaca oppo-

site to that of the female. The tail of the male passed under the female's tail and coiled around it. The male clasped the female with both pairs of limbs. The copulation lasted for 8½ minutes when female began to slide down from underneath. Prashad (1916) recorded copulation time 4 minutes and McCann (1940), 10 minutes in case of *Hemidactylus flaviviridis*. The male was found to lick her vent after copulation. Both the partners were rested thereafter. During copulation they are not disturbed by the presence of the observer even when about a metre from them.

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